

US009410061B2

(12) United States Patent

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US 9,410,061 B2

(45) **Date of Patent:**

(10) **Patent No.:**

Aug. 9, 2016

(54) TACKIFIER AND MODIFIED STARCH FORMULATION, SYSTEM AND METHOD

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(*) Notice: Subject to any disclaimer, the term of this

patent is extended or adjusted under 35

U.S.C. 154(b) by 0 days.

(21) Appl. No.: 14/851,301

(22) Filed: **Sep. 11, 2015**

(65) **Prior Publication Data**

US 2016/0002503 A1 Jan. 7, 2016

Related U.S. Application Data

- (62) Division of application No. 13/745,450, filed on Jan. 18, 2013, now Pat. No. 9,150,713.
- (60) Provisional application No. 61/587,978, filed on Jan. 18, 2012.

(51) Int. Cl.

 C08L 3/00
 (2006.01)

 C08L 3/02
 (2006.01)

 C09J 103/04
 (2006.01)

(52) U.S. Cl.

(58) Field of Classification Search

(56) References Cited

FOREIGN PATENT DOCUMENTS

CN 102010678 4/2011 CN 102010678 A * 4/2011

Primary Examiner — Kelechi Egwim

(57) ABSTRACT

This disclosure describes formulations, systems and methods for a novel tackifier. The novel tackifier is composed of a modified starch and an acrylamide.

12 Claims, 18 Drawing Sheets

^{*} cited by examiner